

What is Claimed is:

1. A cosmetics dispensing system comprising:  
a controller,  
a plurality of nutating pumps,  
5 a plurality of reservoirs of cosmetics ingredients,  
a plurality of nozzles,  
a manifold for concentrically supporting the nozzles,  
a turntable rotatably mounted beneath the manifold, the turntable including a  
through opening for permitting the passage of fluid from one of the nozzles  
10 therethrough,  
a motor for rotating the turntable,  
the controller linked to the plurality of nutating pumps and the motor,  
each pump being in fluid communication with one of the reservoirs and vice  
versa, each pump being connected to one of the nozzles and vice versa.  
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2. The system of claim 1 wherein the controller is also linked to one of a  
keyboard or touch screen for inputting a cosmetics formula to be dispensed.
3. The system of claim 1 wherein the controller activates the motor to  
20 rotate the turntable so that the through opening is aligned beneath one of the nozzles  
and then activates the pump connected to said nozzle to dispense fluid from the  
reservoir connected to said pump through said nozzle and said through opening to a  
container disposed therebelow.
- 25 4. The system of claim 3 wherein the turntable comprises a top side  
facing the manifold and an underside which is connected to a container holder for  
holding said container with an opening of said container disposed beneath the through  
opening.
- 30 5. The system of claim 4 wherein the container holder comprises two  
downwardly extending partially cylindrical and concentric walls, each wall  
comprising a radially inwardly extending lip for gripping a container neck, the walls  
being defined by two different radii for accommodating containers of two different  
sizes.

6. The system of claim 4 further comprising a drip cutter disposed on the turntable at the through opening.

5 7. The system of claim 6 wherein the drip cutter comprises a wire that extends across the through opening, the wire engaging a drip as the turntable is rotated away from one nozzle towards another nozzle.

8. The system of claim 7 wherein the drip cutter comprises two wires that extend across the through opening on opposite sides thereof so one of the wires  
10 engages the drip as the turntable is rotated in one direction and the other wire engages the drip as the turntable is rotated in an opposite direction.

9. The system of claim 7 wherein the wire is heated by passing current through the wire.

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10. The system of claim 8 wherein both wires are heated by passing current through both wires.

11. The system of claim 6 wherein the drip cutter is an air knife.

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12. The system of claim 1 wherein each nozzle comprises a check valve.

13. The system of claim 1 wherein each nutating pump comprises a check valve.

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14. The system of claim 1 wherein the controller communicates a signal to each nutating pump to perform a partial reverse stroke or a partial suck back stroke after a dispense to limit dripping from the nozzles.

15. A method of dispensing a cosmetic preparation into a container at a point of sale, the method comprising:

providing a container comprising an open top and mounting the container to an underside of the turntable and beneath the through hole of the turntable of the

5 dispensing system of claim 1;

inputting a container size and a formula to the controller;

rotating the turntable until the through opening is disposed below a nozzle connected to a pump that is connected to a reservoir containing a first base suspension and activating said pump to add a correct amount of the first base suspension to the

10 container;

rotating the turntable until the through opening is disposed below a nozzle connected to a pump that is connected to a reservoir containing a suspension comprising one or more colorants and activating said pump to add a correct amount of the suspension comprising one or more colorants to the container and on top of the first base suspension and repeating for all suspensions comprising colorants to be added according to the formula;

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rotating the turntable until the through opening is disposed below a nozzle connected to a pump that is connected to a reservoir containing a second base suspension and adding the second base suspension to the container;

20 removing the container and closing the open top of the container with a lid.

16. The method of claim 15 further comprising printing a label for the container with a name of the inputted formula thereon.

25 17. The method of claim 15 wherein the container comprises a neck portion that terminates at the open top, and the method further comprises inserting a bushing down into the neck of the container to prevent the suspensions from splashing upward into the neck or dripping onto the neck during the adding of said suspensions.

18. A cosmetics dispensing system comprising:  
a controller,  
an input terminal linked to the controller for inputting a cosmetics formula,  
a plurality of nutating pumps,  
5 a plurality of reservoirs of cosmetics ingredients,  
a plurality of nozzles,  
a manifold for concentrically supporting the nozzles,  
a turntable rotatably mounted beneath the manifold, the turntable including a  
through opening for permitting the passage of fluid from one of the nozzles  
10 therethrough, the turntable comprising a top side facing the manifold and an underside  
which is connected to a container holder for holding said container with an opening of  
said container disposed beneath the through opening.  
a drip cutter mounted on the turntable and which extends at least partially  
across the through opening,  
15 a motor for rotating the turntable,  
the controller linked to the plurality of nutating pumps and the motor,  
each pump being in fluid communication with one of the reservoirs and vice  
versa, each pump being connected to one of the nozzles and vice versa,  
wherein the controller activates the motor to rotate the turntable so that the  
20 through opening is aligned beneath one of the nozzles and then activates the pump  
connected to said nozzle to dispense fluid from the reservoir connected to said pump  
through said nozzle and said through opening to the container disposed therebelow.

19. The system of claim 18 wherein the container holder comprises two  
25 downwardly extending partially cylindrical and concentric walls, each wall  
comprising a radially inwardly extending lip for gripping a container neck, the walls  
being defined by two different radii for accommodating containers of two different  
sizes.

30 20. The system of claim 18 wherein the drip cutter comprises a wire that  
extends across the through opening, the wire engaging a drip as the turntable is  
rotated away from one nozzle towards another nozzle, the wire being connected to a  
current source for heating the wire.

21. The system of claim 20 wherein the drip cutter comprises two wires that extend across the through opening on opposite sides thereof so one of the wires engages the drip as the turntable is rotated in one direction and the other wire engages the drip as the turntable is rotated in an opposite direction, both wires being connected  
5 to a current source for heating said wires.

22. The system of claim 18 wherein the controller communicates a signal to each nutating pump to perform a partial reverse stroke or a partial suck back stroke after a dispense to limit dripping from the nozzles.  
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23. The system of claim 18 further comprising a printer for printing a name of the inputted formula on a label to be attached to the container.